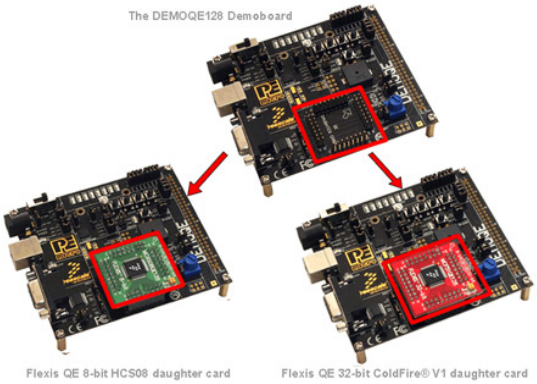
Easy-to-use Development Tools and Software

- **Enhanced Out of Box Experience**
  - Available for all ColdFire Striker devices
  - In-box DVD contains everything you need to jumpstart development
    - CodeWarrior for ColdFire 7.0 Special Edition
    - Access to Complimentary USB or Ethernet Stack (where needed)
    - Out of the Box Walkthrough – get up and running in 5 minutes
    - Application examples and application notes
    - Links to 3rd party tool vendors
- **Simplify Development with CodeWarrior® for ColdFire 7.0**
  - With Device Initialization and Processor Expert™
  - Customer benefits with these differentiated features:
    - Graphical interface built into software
    - Quick set up registers
    - Online documentation available within a click
    - More code provided for engineers to save development time
- **Reduce time with Processor Expert for ColdFire**
  - Initialize ColdFire processors quickly w/out writing the C Code
  - Configure parameters through a GUI
  - Initialization code automatically generated for you
  - Support available in November 2007

DEMOQE128 Evaluation Board

The DEMOQE128 is a low-cost development system designed for demonstrating, evaluating, and debugging the Freescale MC9S08QE128 and MCF51QE128 microcontrollers. Its Multilink circuitry on the DEMOQE128 board allows the processor on the DEMOQE128 to be debugged and programmed via USB from the PC. In addition, the demo board can be powered using the USB bus.

Supports S08 and ColdFire V1 QE128 devices through plug-in daughter cards. It also supports plug-in RF daughter cards for SMAC and 802.15.4.



FEATURES

- On-board logic analyzer
- On-board virtual serial port
- Asymmetrically positioned 4 8x2 male connectors for interchangeable daughter cards
- P&E's embedded multilink circuitry populated on the bottom
- RS-232 serial port w/ DB9-F connector
- SCI signals connected to P&E's embedded multilink through jumpers
- ON/OFF power switch w/LED indicator
- A 5V DC to 12V DC power supply input barrel connector
- Power input selection jumpers for selecting the input voltage source:
  - Power input from embedded multilink to LDO regulator
  - Power input from DC power jack to LDO regulator
  - Regulated VDD output at 3.0V
  - Regulated VDD output at 2.1V
  - Power input from battery
  - Power input from MCU_PORT connector
  - RESET push button and LED indicator w/Enable
  - Optional external crystal circuitry layout (not populated)
- User Features:
  - 3-axis Accelerometer w/Enable
  - 8 user LEDs w/Enable
  - 4 user push buttons w/Enable
  - 1 Piezzo buzzer w/Enable
- IIC pullups w/ Enable
- 10K Ω POT w/Enable
- Option Jumpers:
  - COM_EN for 1.8V to 4.25V RS232 transceiver
  - TXD_EN for SCI_TXD to embedded multilink
  - RXD_EN for SCI_RXD to embedded multilink
  - INPUT_EN for two input channels to embedded multilink

SPECIFICATIONS

- Board Size 3.5 x 4.0
- Power Input:
  - USB cable: 5V DC, 500mA max
  - DC power jack: 2.5/5.5mm barrel connector
  - 5V DC to 12V DC center positive
  - Two AAA battery cells

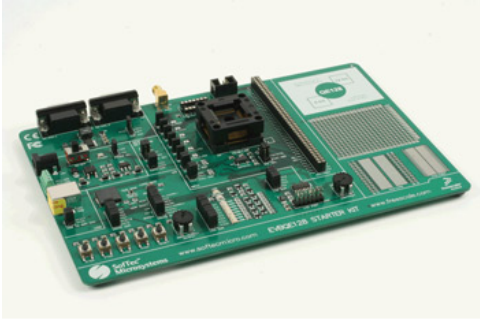
DEMOQE Daughter Card Features

- Built-in BDM eliminates need for external BDM cable
- Four bottom-mounted asymmetrically positioned 8x2 female connectors to mate with the DEMOQE base board a top-mounted MC9S08QE128CLH or MCF51QE128CLH chip
- One RS232 COM port plus optional SCI via USB
- Virtual logic analyzer through two TPM channels via USB
  - Three-axis accelerometer
  - Operates from battery pack with two “AAA” batteries

Kit Contains

- DEMOQE base board with a MC9S08QE128 Daughter Card installed
- MCF51QE128 Daughter Card
- DVD Breaking Bit Boundaries
- Getting Started With QE128
- 2-cell AAA battery package
- USB cable
- Quick Start Guide
- Freescale warranty card

Flexis QE128 Evaluation Board



The EVBQE128 evaluation board has been designed for the evaluation, demonstration and debugging of the Freescale Flexis QE128 microcontrollers (MC9S08QE128 and MCF51QE128). The EVBQE128 can be used as a standalone application or can be controlled by a host PC via its built-in microDART™ interface.

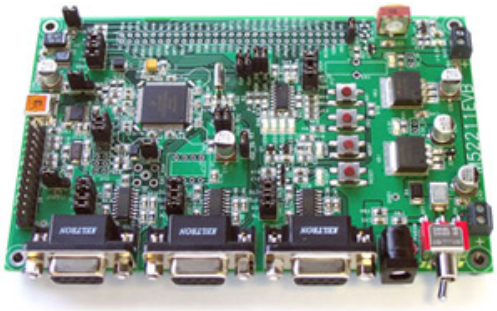
FEATURES

- An “MCU” section containing:
  - An 80-pin LQFP socket accepting either the MC9S08QE128 or the MCF51QE128 microcontroller
  - A crystal oscillator, a provision for a clock module, a provision for a connector for providing an external clock source, together with jumpers to select the clock source
  - A BDM connector for in-circuit debugging/programming with an external instrument
  - A female header connectors with all of the MCU signals
- A power supply section containing:
  - A 12V DC barrel input connector (2.1 mm)
  - A four-way micro terminal block for providing specific power supplies and voltage references to the microcontroller
  - A jumper to select the power supply source (USB bus or barrel connector)
  - A power on/off switch
- A built-in “microDART INTERFACE” section (with the main circuitry mounted on the back of the board) which allows the host PC to communicate with the microcontroller through a standard USB interface. Jumpers are present to configure this module. Thanks to the microDART in-circuit debugging firmware, BDM commands are sent to the target microcontroller through the USB bus. Additionally, a virtual COM port is automatically available over the same USB connection. This virtual COM port can be used by standard terminal programs, like HyperTerminal, to send/receive serial characters to/from the target microcontroller.
- An “I/O” section containing:
  - A Reset push-button
  - Four additional push-button
  - One potentiometer
  - Eight dip-switches
  - A piezoelectric buzzer
  - A light sensor
  - A temperature sensor
  - Ten user LEDs
  - A circuitry for driving and external LCD
  - A series of jumpers to connect/disconnect the above controls to/from the microcontroller
- An “RS-232” section containing two RS-232 connectors together with a jumper to enable the RS-232 communication
- A “SERIAL SETTINGS” section containing jumpers to select communication options

Kit Contains

- The EVBQE128 evaluation board
- 80-pin LQFP MC9S08QE128 and MCF51QE128 microcontrollers
- A USB cable
- A pick-up vacuum pump
- A universal, 12V DC power supply
- System software DVD-ROM, including CodeWarrior™ Development Studio
- A Quick Start Guide sheet

MCF5221X Family Evaluation Board



The M52211EVB evaluation board provides an excellent vehicle for embarking on a high-performance embedded design of the MCF5221x family of ColdFire microprocessors. With USB 2.0 On-The-Go connectivity, breakout connectors for serial interfaces (including UART, I^2C, QSPI, GPIO, and ADC), and support for a Zigbee-ready daughter card, this complete package includes all the components for realizing a MCF5221x design quickly and easily.

This cost efficient evaluation kit offers an impressive array of complementary software. Included with the evaluation kit is a fully licensed, complimentary Special Edition of the CodeWarrior Development Studio for ColdFire Architectures for development of applications up to 128Kbytes code size, as well as a host of ther low cost and professional tools from leading 3rd party tool vendors.

The evaluation board comes fitted with an 80MHz MCF52211 microcontroller with 128KByte internal flash. The MCF52211 microcontroller has a superset of the same functional modules and interfaces as those on the other devices supported.

FEATURES

- Memory Devices
  - 16-Kbyte SRAM internal to the MCF52211 device
  - 128-Kbyte Flash internal to the MCF52211 device
- User Interface
  - USB 2.0 On-The-Go module
  - Abort/IRQ7 logic switch (debounced)
  - PLL Clocking options - Oscillator, Crystal or SMA for external clocking signals
  - 3 - UART interface
  - Supports Zigbee-ready RF daughter card
  - Breakout connector for serial interfaces (including I^2C, QSPI, GPIO, and ADC)
  - LEDs for power-up indication, general purpose I/O and timer output signals
  - Potentiometer and light sensor dedicated to the ADC
  - CAN transceiver interface
  - BDM/JTAG interface
  - Super Cap for battery life evaluation
- Software
  - Resident firmware package that provides a self-contained programming and operating environment (dBUG)
  - Evaluation software from leading 3rd party tool vendors

Kit Contains

- M52211EVB single board computer
- M52211EVB user's manual
- One RS232 communication cable
- One BDM (Background Debug Mode) "wiggler" cable
- MCF52211UM ColdFire integrated microprocessor user manual
- ColdFire programmers reference manual

M52233DEMO: Development Kit for MCF5223x Microcontrollers

The M52233DEMO development system for the MCF52233 ColdFire microcontroller provides a fully functional low cost vehicle for embarking on a high-performance embedded design of the MCF5223x Family of ColdFire microprocessors. Application development is quick and easy with the included DB9 serial cable and integrated BDM. The integrated BDM allow easy application development and debugging. An optional BDM port compatible with standard ColdFire BDM / JTAG interface cable and hosting software is provided, but not installed.

In addition this low-cost development system offers an impressive array of complementary software. Included with the evaluation kit is a fully licensed, complimentary Special Edition of the CodeWarrior Development Studio for ColdFire Architectures for development of applications up to 128Kbytes code size, as well as a host of the low cost and professional tools from leading 3rd party tool vendors, including a complementary ColdFire TCP/IP stack by InterNiche.

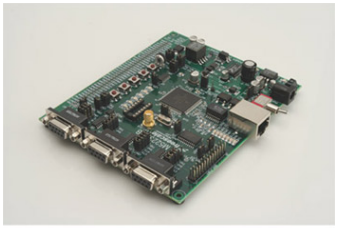
FEATURES

- MCF52233 CPU
  - 60MHz internal bus
  - 256KByte Flash
  - 32KBbyte RAM
  - 80 LQFP package
  - DMA controller with timers
  - Programmable interrupt timer
  - 8ch x 12-Bit ADC
  - QSPI, IIC, and CAN serial ports
  - Fast Ethernet controller (FEC) and Ethernet Phy (ePHY)
  - (3) UART serial ports with DMA capability
  - (4) GPT timers
  - BDM / JTAG ports
  - 3.3V operation
- User Features
  - 3-axis accelerometer
  - 4 User LED' with enable
  - 2 User push switches
  - 5k ohm POT with enable
- Software
  - Evaluation software from leading 3rd party tool vendors
  - InterNiche TCP/IP Stack

Kit Contains

- M52233DEMO single board computer
- M52233DEMO user's manual
- One RS232 communication cable
- One BDM (Background Debug Mode) "wiggler" cable
- MCF52233UM ColdFire integrated microprocessor user manual
- ColdFire® programmers reference manual
- A selection of third party developer tools and literature
- ColdFire TCP/IP Stack by InterNiche

M52235EVB: Evaluation Kit for MCF5223x Microcontrollers



The M52235EVB evaluation board provides an excellent vehicle for embarking on a high-performance embedded design of the MCF5223x Family of ColdFire microprocessors. With 10/100 BaseT Ethernet connectivity, breakout connectors for serial interfaces (including I^2C, QSPI, GPIO, and ADC), and support for a Zigbee-ready daughter card, this complete package includes all the components for realizing a MCF5223x design quickly and easily.

This cost efficient evaluation kit offers an impressive array of complementary software. Included with the evaluation kit is a fully licensed, complimentary Special Edition of the CodeWarrior Development Studio for ColdFire Architectures for development of applications up to 128Kbytes code size, as well as a host of the low cost and professional tools from leading 3rd party tool vendors, including a complementary ColdFire TCP/IP stack by InterNiche.

The evaluation board comes fitted with an 60MHz MCF52235 microcontroller with 256KByte internal flash. The MCF52235 microcontroller has a superset of the same functional modules and interfaces as those on the other devices supported.

FEATURES

- Memory Devices
  - 25KBbyte Flash internal to the MCF52235 device
- User Interface
  - Ethernet port 10/100Mb/s with on-chip PHY
  - Abort/IRQ7 logic switch (debounced)
  - PLL Clocking options - Oscillator, Crystal or SMA for external clocking signals
  - 3 - UART interfaces (auxiliary RS-232 serial port) and standard DB9 connections
  - Supports Zigbee-ready RF daughter card
  - Breakout connector for serial interfaces (including I^2C, QSPI, GPIO, and ADC)
  - LEDs for power-up indication, general purpose I/O and timer output signals
  - Power over Ethernet
  - Potentiometer and light sensor dedicated to the ADC
  - CAN transceiver interface
  - BDM/JTAG interface
- Software
  - Resident firmware package that provides a self-contained programming and operating environment (dBUG)
  - Evaluation software from leading 3rd party tool vendors
  - InterNiche TCP/IP Stack

Kit Contains

- M52235EVB single board computer
- M52235EVB user's manual
- One RS232 communication cable
- One BDM (Background Debug Mode) "wiggler" cable
- MCF52235UM ColdFire integrated microprocessor user manual
- ColdFire® programmers reference manual
- A selection of third party developer tools and literature
- ColdFire TCP/IP Stack by InterNiche